

Claim Amendments

1. (Currently amended) A [[porous]] polymer film comprising a blend of (a) at least one particulate non-film forming material and (b) at least one film forming polymer comprising polymer particles having particle diameters small enough to fit in a matrix of interstices formed by the non-film forming particles, wherein the film forming polymer is present in the blend from between 5 and 35%, based on the total volume of polymer solids; the resulting non-friable polymer film having a network of pores or channels throughout the film~~[[, and the film is non-friable]]~~.
2. (Currently amended) The [[porous]] polymer film according to claim 1, wherein both the particulate non-film forming material and the film forming polymer are ~~[[blend is]]~~ prepared from a water-borne latex dispersion of polymer particles.
3. (Currently amended) The [[porous]] polymer film according to claim 1, wherein the film forming polymer has a Tg not greater than 20° C and the particulate non-film forming material is a polymer having a Tg of at least 30°C.
4. (Currently amended) The [[porous]] polymer film according to claim 1, wherein the particulate non-film forming material is selected from the group consisting of: acrylic latex polymers, hollow polymer particles, core-shell polymers, acrylic polymers, polymer encapsulants, large dimension emulsion polymers, inorganic compositions, inorganic compositions with adsorbed compounds, and mixtures thereof.
5. (Currently amended) The [[porous]] polymer film according to claim 2 [[1]], wherein the film forming latex polymer [[is composed of water-borne latex]] particles [[having]] have particle diameters [[no greater than]] 20 % or less in size than particle diameters of [[the largest dimension of]] the particulate non-film forming material.

6. (Currently amended) The [[porous]] polymer film according to claim 1, wherein the [[porous]] polymer film maintains porosity up to 160°C.
7. (Currently amended) [[A porous]] The polymer film according to claim 1, wherein both the particulate non-film forming material the film forming polymer comprise [[comprising a water-borne latex dispersion of a]] multi-stage latex polymers [[having at least one non-film forming material and at least one film forming polymer, the porous film maintains porosity up to 160° C]], wherein the particle diameters of the film forming polymer are 20 % or less in size than particle diameters of [[has a Tg no greater than 20° C,]] the particulate non-film forming material [[is a polymer having a Tg of at least 30°C, wherein the film forming polymer is present in the blend from between 5 and 35%, based on the total volume and the film is non-friable]].
8. (Currently amended) The [[porous]] polymer film according to claim 1 [[7]], wherein the film forming polymer comprises a multi-stage latex polymer and the particulate non-film forming material is selected from the group consisting of: acrylic latex polymers, hollow polymer particles, core-shell polymers, polymer encapsulants, large dimension emulsion polymers, inorganic oxides, aluminosilicates, silicates, carbonates and mixtures thereof.
9. (Withdrawn per restriction) A process for producing porous films comprising the steps of depositing a composition of claim 1 in a liquid state on a substrate and evaporating a carrier medium below 100 °C.
10. (Withdrawn per restriction) A process according to claim 9, wherein the evaporation of the carrier medium occurs between 0°C to 80°C.
11. (Withdrawn per restriction) The process according to claim 9, wherein the composition is selected from the group consisting of a blend of at least one non-film forming material and at least one film forming polymer, a multi-stage polymer having

at least one non-film forming material and at least one film forming polymer, a large dimension emulsion polymer and combinations thereof.

12. (Withdrawn per restriction) The process according to claim 9, wherein the film maintains porosity up to 160°C.
13. (Withdrawn per restriction) The process according to claim 9, wherein catalysts are entrapped within the film, the catalysts selected from the group consisting of chemical catalysts, bacteria, yeast, fungi, plant algal and mammalian cells and combinations thereof.
14. (Withdrawn per restriction) The process according to claim 13, wherein the films are utilized in a chemical or biochemical reactor utilized to perform a chemical transformation.
15. (Withdrawn per restriction) The process according to claim 9, wherein the porous films are applied using printing processes which are selected from the group consisting of flexographic printing, gravure printing, ink jet printing, and laser printing.
16. (Withdrawn per restriction) The process according to claim 13 wherein two porous films are prepared, each film comprising a different catalyst and the films are in intimate contact with each other.